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CONTENTS

Discoveries and Current Events. — Germany: Colorado Beetle Situation in 1940, p. 89. – Argentine Republic: Pepper wilt and control measures in the Province of Mendoza, p. 90. – Spain: Ammonium phosphate as a Bait for the Olive Fly, p. 91. – Italy: Experiments on the Insecticidal Value of Methyl Formate in the Control of Granary Insects, p. 92.

Various Questions. — Spread of Snapdragon Rust in Europe, p. 93.

Legislative and Administrative Measures. — Germany, p. 94. – Germany (Bavaria), p. 96. – Germany (Protectorate of Bohemia and Moravia), p. 97. – Germany (Württemberg), p. 97. – Argentine Republic, p. 97. – Italy, p. 97. – Peru, p. 98. – Union of South Africa, p. 98.

Recent Bibliography, p. 99.

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ACTIVITY OF THE INTERNATIONAL INSTITUTE OF AGRICULTURE

The Argentine Minister of Foreign Affairs at the International Institute of Agriculture. — H. E. M. Enrique Ruiz Guiñazu, new Minister of Foreign Affairs of the Argentine Republic, former Ambassador to the Holy See, before leaving Rome to take possession of his high position, paid a visit to the International Institute of Agriculture.

The visit took place on April 8, 1941. The distinguished guest was received by the President of the Institute, Baron Acerbo, Mr. J. Clyde Marquis, Vice-President, the Argentine Delegate to the Permanent Committee of the Institute, Mr. Comolli, the other Delegates present in Rome, the Secretary General and the Heads of Bureaux. Among the guests was His Excellency Manuel E. Malbran, Argentine Minister to the Quirinal.

His Excellency Acerbo delivered the following address:

Your Excellency,

It is a great honour and pleasure for me to greet you among us and to extend to you the most cordial welcome on behalf of the Institute; of this organization which has always shown the greatest interest in the agricultural development and in the progress of your noble country and which for thirty-five years has found your country always ready to co-operate with it in a spirit of appreciative solidarity.

The Argentine agricultural industry, which is the basis of the whole social structure of the country and derives from the land its most powerful energies, has always been, and still is, one of the most important and interesting subjects for study on the part of all our Bureaux. They have followed and follow with the utmost care all the phases of the economic development of Argentina on which a large documentation has been gathered. Quite often our publications contain articles and very accurate surveys on Argentine institutions and agricultural policies. Both as Italian Minister of Agriculture and as President of this Institute, I have had myself the occasion and the honour to deal with agricultural matters in your country.

At this moment when Your Excellency, after accomplishing your high mission as an Ambassador, is going to take the direction of the foreign policies of the Argentine Republic, it is particularly agreable for us to remember the ties which bind us to your Government.

We know quite well that the history of the Argentine nation, its economic structure and social organization, and especially its agricultural importance make your noble country one of the fundamental elements of equilibrium in the commercial and cultural exchanges among the continents. We also know that your country's very valuable contribution to economic settlement in the future is essential to the wealth and welfare of the whole world.

We congratulate you, Your Excellency, upon the fact that at this time when international relations are so difficult, the supreme Argentine authority has called you to fill a post of so high a responsibility. In this position, your wisdom will be directed to the exploitation of the inexhaustible resources of your fecund land for the preparation of a better future.

The International Institute of Agriculture will accompany you with its most cordial good wishes in the work which you are going to undertake and in which we feel you are going to meet with the most brilliant success. The Institute is happy to confirm to Your Excellency its sympathy and friendship towards Your Excellency's great country.

H. E. Enrique Ruiz Guiñazu replied as follows:

Mr President,

It is a great satisfaction for me to hear the words of appreciation you have just pronounced to recall the friendly collaboration which for over thirty years has existed between the Argentine Republic and this Institute whose activity identifies itself and agrees on every point with the direction followed by my country in the field of agricultural studies.

If to this circumstance we add the valuable scientific collaboration under the form of publications and surveys prepared and completed by your Institute, it is easy to understand the high estimation and well justified consideration with which the Argentine public powers receive the technical and statistical information of the International Institute of Agriculture whereby it is easy to follow the evolution of world agricultural policies.

Allow me, Mr President, to particularly emphasize one of the most important points of your fine address when you say that my country is one of the fundamental elements of equilibrium in the commercial and cultural exchanges among the continents. This statement and its highly authoritative signification seem to indicate exactly, through the knowledge of territories and climates, physical factors and physiological and geographic conditions of nations, the importance of world economic activity and most particularly the part played by the Argentine agricultural industries as powerful sources of wealth.

The Argentine authorities, fully realizing the importance of the present hour and of a future which is still obscure as regards the possible gravitation in this field of the whole American continent and in a more special manner, of the countries which belong to it, have given their utmost attention to instruction and scientific research in agricultural problems, and have encouraged the establishment of centers of studies and of national and international institutions. Among these is the Institute where we are assembled today. An abundant documentation, full of useful suggestions added to studies and surveys already accomplished, has been gathered by these institutions to the best advantage of agriculturists and farmers.

INTERNATIONAL BULLETIN
OF PLANT PROTECTION

1941 No. 5

DISCOVERIES AND CURRENT EVENTS *

GERMANY.

Colorado Beetle Situation in 1940 †

The first adults of the Colorado beetle (*Leptinotarsa decemlineata*) were found on March 11, 1940 when carrying out embankment work at Ötigheim, Rastatt District. Other adult insects were observed on April 22, on the surface of the soil at Schwetzingen, Mannheim District. Others again were seen on a shrub at Hauenstein, Pirmasens District, on May 6. During the remainder of the month, only isolated adults were observed in different regions. In the last week of the month, numerous cases were reported.

Egg-laying was first observed on May 23 at Oppau, Ludwigshafen District. A larva was found at Griesheim, Darmstadt District, on June 3. The first appearance of nymphs dates from June 26 and was reported at Bingen, chief town of the district. The first adult of the new generation was found on July 1 at Büttelborn, Gross-Gerau District. The last adults were seen on November 10.

On the whole, the area infested more or less corresponds to that in 1939 (see this *Bulletin*, 1940, No. 3, pp. 49-50).

This beetle was reported in 174 different circumscriptions in 1940 as against 170 in 1939. Infestation, however, was more severe in the zone chiefly affected by this pest.

The following table shows the distribution of the communes infested:—

	Communes		Communes
PRUSSIA:		PRUSSIA (*continued*):—	
Hanover Province:		Rhine Province:	
Hanover District	1	Koblenz District	281
Lüneburg ..	1	Düsseldorf ..	12
Westphalia Province:		Köln ..	10
Münster District	1	Trier ..	318
Hessen-Nassau Province:		Aachen ..	16
Kassel District	33	Hohenzollern Province:	
Wiesbaden ..	92	Sigmaringen District	2

* Under this and the third heading the countries are arranged in French alphabetical order.

† Communication from the 'Biologische Reichsanstalt für Land- und Forstwirtschaft', Berlin-Dahlem, Germany, official correspondent of the Institute.

		Communes
BAVARIA:		
Mainfranken	District	25
Swabia	..	2
		268
WURTTEMBERG:		
Konstanz	District	167
Freiburg	..	449
		616
BADEN:		
Karlsruhe	District	190
Mannheim	..	96
		286
HESSE:		
		393
SAARPFALZ:		
Palatinate	District	459
Saarland	..	128
		587

ARGENTINE REPUBLIC.

Pepper Wilt and Control Measures in the Province of Mendoza *

The research work carried out by Mr. Rafael E. Pontis, Agricultural Engineer, Chief of the Laboratory of Phytopathology at Mendoza, under the Argentine Ministry of Agriculture, has proved that this disease is caused by *Fusarium vasinfectum* Atk. and also determined the best means of controlling the causal agent.

In the Province of Mendoza, pepper wilt has become very serious from the economic point of view; in years favourable for its spread, whole plantations have been destroyed. Up to the present, wilt disease has been reported in the departments of La Paz, Junín, Santa Rosa, Rivadavia, Luján, Maipu, Lavalle, Guaymallén and Las Heras. The most seriously attacked area, however, is the department of Guaymallén, to such an extent that in the Corralitos district, which formerly produced heavy yields of peppers, it is no longer possible to cultivate this crop.

This disease first appears as a slight drooping of the lowest leaves of the plant; shortly afterwards, the upper leaves wilt and show a decided droop; the leaves tend to fold perpendicularly at the nervure and change from green to light brown, finally dying off. The woody stem remains erect, while the majority of the leaves droop and fall off.

Infection usually begins at the base of the stem. It is not even necessary for the tissue to be broken; the fungus traverses the healthy tissue and in three to five weeks a fully developed plant may wilt completely. Infection usually begins at the tip of the main root which rapidly blackens within 24 hours of contamination. This blackening gradually extends to the secondary roots and the hypocotyl. All the plants die off within 8 to 10 days. During the attack the surrounding temperature remained at 27°C.

* Communication from the official correspondent of the Institute, Mr JUAN B. MARCHIONATTO, Agricultural Engineer, Director of 'Sanidad Vegetal', Ministry of Agriculture, Buenos Aires, Argentine Republic.

Any parts of diseased plants left on the soil always serve as a new focus of disease for the following year, and the preliminary treatment of the soil, by scattering this diseased plant residue over the field, increases the number of foci.

The fungus develops rapidly at temperatures fom 23 to 31°C., the optimum temperature being about 27°C.; at 17°C. growth is very slow, and is still further retarded by a greater fluctuation in temperature. The disease develops very easily in low-lying, wet soil, particularly in very clayey, poorly drained soils.

The data obtained during the years 1936-37 and 1938 showed that the highest percentage of wilt and humidity was found in fields irrigated every four days. The average percentage of plants attacked in these fields was 58.54, while it was only 20.10 in the fields irrigated every 16 days. The average humidity of the fields irrigated every 4 days amounted to 14.67 per cent. and to 11.98 per cent. for those irrigated every 16 days.

In view of the important influence of humidity and temperature on the development of the fungus, a series of experiments on cultivation methods was carried out in order to determine their relation to the disease and to reduce it to a minimum, in other words, to control the disease by methods of cultivation.

Farmers in Mendoza usually grow peppers in furrows from 0.50 m. to 0.80 m. wide; the plants are spaced 0.20 m. apart and are lightly earthed up when about half grown. With this method, the water is almost in contact with the plants whenever irrigated; the roots are very close to the surface and are thus very sensitive to the high temperatures of the soil, and consequently conditions are very favourable for the development of the disease.

If, on the other hand, the plants are grown in very broad furrows, the factors favouring the development of the disease are reduced to a minimum, and considerably fewer plants will be attacked. Experiments were carried out during the years 1936, 1937 and 1938, comparing this method with the usual system of cultivation. The results were conclusive. With this method, the plants are tumped gradually as they develop, the roots penetrate more deeply into soil and are less sensitive to the temperature of the soil surface. Another advantage is that the water is no longer in contact with the plant and only reaches it through infiltration.

SPAIN.

Ammonium Phosphate as a Bait for the Olive Fly *

According to the results of experiments for the control of the olive fly (*Dacus* [*Daculus*] *oleae*) carried out in Andalusia by R. Bohorquez, during the period 1934-37, with the use of glass traps (fly-traps) containing a substance to attract

* Communication from the official correspondent of the Institute, Mr José Del Cañizo, Agricultural Engineer, Central Phytopathological Station, Madrid, Spain.

the insect, a 5 per cent. ammonium phosphate bait gave the best results (it attracted 31 per cent. of the total number of insects trapped with 10 different substances). Next came ammonium fluoride which only attracted 11.9 per cent. It was found that molasses with arsenic had a great attraction for *Chrysopa* and other useful Neuroptera.

ITALY.

Experiments on the Insecticidal Value of Methyl Formate in the Control of Granary Pests *

Various experiments have been carried out with a view to testing the insecticidal value of methyl formate.

Experiments were first made to ascertain the efficacy of this product in a closed area, without grain and containing air at normal pressure, using 80 g. of methyl formate to every 1,000,000 cm^3.

These preliminary experiments having given satisfactory results, tests were undertaken on the action of methyl formate in premises containing grain. The results obtained differing appreciably from those supplied by the earlier experiments, comparative experiments were carried out simultaneously with carbon disulphide.

Having thus ascertained that the practically negative results given by methyl formate in a closed area containing wheat could not be attributed to the technique followed, experiments were renewed, progressively increasing the percentage of liquid per cm^3 of area to be treated up to 1,000 g. per 1,000,000 cm^3.

The increase in amount employed did not lead to a proportional rise in mortality of the insects as, during the course of these experiments, 12 hours after beginning treatment, *Calandra* adults found in the wheat were still in excellent condition.

An experiment was also effected in premises of fairly large cubage (363 m^3) and used as a wheat granary.

The insecticide was used at the rate of 80 g. per 1,000,000 cm^3.

This experiment confirmed the insecticidal capacity of methyl formate in the surface layers of grain stocks, but only in the case of adult insects as the larvae even in the top layers were not destroyed.

These experiments show, therefore, that although methly formate is a good insecticide, it cannot be recommended for the disinfestation of wheat stocks owing to its low power of penetration through grain layers over 10-15 cm. in depth.

* Communication from Drs ANTONIO SERVADEI and FILIPPO VENTURI, Royal Station of Agricultural Entomology, Florence, transmitted by the Royal Station of Plant Pathology, Rome, official correspondent of the Institute.

VARIOUS QUESTIONS

Spread of Snapdragon Rust in Europe *

Snapdragon rust (*Puccinia antirrhini* Diet. et Holw.) is now spreading very rapidly from Central Europe towards the East and in recent years has made its appearance in the U.S.S.R. At first, this disease is only seen in a few isolated localities, causing little damage. Soon, however, it spread rapidly and led to more serious losses.

Country of origin of the disease. — There is every probability that North America is the country of origin of *P. antirrhini*, this rust having been reported for the first time in 1895, in California, by W. C. Blasdale. In 1903, this parasite caused heavy losses in San Francisco, in 1913 at Chicago. in 1914 in the States of Ohio, Indiana, etc. It is now found in 24 Federal States as well as in 5 provinces of Canada and in the Bermudas.

Spread in Europe. — In Europe, snapdragon rust was reported for the first time by Viennot-Bourgin in 1931 in the North of France (Grignon, Dept. of Seine-et-Oise). The fungus soon appeared in England (1933), in Germany and Denmark (1934), in Italy, Switzerland, Hungary, Austria and Sweden (1935), in Poland, Latvia, Rumania, Egypt and Morocco (1936) and in the U.S.S.R. (1937).

To-day, this disease has already become common on snapdragons in Central and Western Europe. Its propagation must be considered as extremely rapid seeing that it has spread throughout Central and Western Europe within less than ten years.

In the U. S. S. R., this rust was observed in 1937, according to Naumov, simultaneously in widely scattered localities (Leningrad, Caucasus, Odessa, Voronezh), even though quarantine measures had been taken against this disease and the import of snapdragon seed has been reduced to practically nil.

* Communication from Prof. Dr E. Lepik, Director of the University Phytopathological Station, Tartu, Estonia, U.S.S.R.

LEGISLATIVE AND ADMINISTRATIVE MEASURES

Germany. — By Decree dated December 19, 1940, the Chief of the Civil Administration of Alsace, with a view to checking the spread of grape phylloxera [*Dactylosphaera vitifolii*] has prescribed that viticulturists must cultivate exclusively grafted vines immune to phylloxera. To this end, a special Anti-phylloxera Service has been organized.

The planting of rooted cuttings of European vines is prohibited.

A special permit is required for nurseries engaged in the production and sale of grafted vines; they must also come under official supervision.

The frontier of Alsatian territory is closed to all imports and exports of vines, with or without roots. The sale of vines at markets and by pedlars is prohibited.

Dealers in vines are required to start and keep up to date registers giving exact indications on the origin, sale and consignment of vines or parts of vines. (*Amtliche Pflanzenschutzbestimmungen*, Berlin, 1. Februar 1941. Bd. XIII, Nr. 1, S. 13-15).

*** Decree dated January 10, 1941, relative to the control of virus diseases attacking potatoes, prescribes, in the circumscription of Marienwerder, that, with a view to eliminating the peach aphid (*Myzodes* [*Myzus*] *persicae*), vector of serious virus diseases affecting the potato, all peach and apricot trees will have to be removed within the month following the publication of this Decree.

Planting of peach and apricot trees is prohibited. (*Ibid.*, S. 10-11).

*** A Decree of January 13, 1941 regarding the circumscription of Dantzig, contains provisions similar to those established for the circumscription of Marienwerder by the Decree of January 10, 1941 summarized above. The urban districts of Dantzig, Zoppot and Elbing, however, are exempted; only poorly developed and sterile peach and apricot trees need be removed. The healthy trees may be kept, but must be treated with carbolineum and an emulsion containing nicotine and soap officially recognized as effective. The number of peach and apricot trees growing in the three aforesaid districts must be notified to the police authorities. (*Ibid.*, S. 9-10).

*** A Decree of February 2, 1941 modifies Decree of August 25, 1938 relative to the use of ethylene oxide [see this *Bulletin*, 1939, No. 2, pp. 28-29].

Additions have been made to § 3 of the latter Decree, containing detailed prescriptions on the modalities and precautionary measures to be observed in the use of this poisonous gas without changing essentially, however, its provisions.

With a view to preventing the occurrence of explosions, the quantity of gas to be used in one treatment shall not exceed 75 g. per cubic metre of the premises to be fumigated. (*Ibid.*, 1. März 1941, S. [69]-72.

*** Another Decree of the same date prohibits, in a general sense, the use of the preparation ' Tritox ' (trichloracetonytrile) in the control of plant and animal parasites.

Persons, however, by making application and who will have been recognized as qualified from the physical and intellectual standpoint, will be authorized to employ the said preparation; they will have to prove that they possess the necessary theoretical and practical knowledge. In the same way, concerns specialized in the matter will obtain the right to use ' Tritox ' for fumigation purposes. (*Ibid.*, S. 72-73).

*** The provisions regulating the application of the Decree of February 2, 1941 summarized above, order, *inter alia*, the declaration to the police authorities of all fumigation operations to be executed by means of the preparation ' Tritox ' at least 24 hours before commencement.

Operations should be carried out by at least two persons of which one who will supervise the work, will be provided with the special authorization required.

Each person taking part in fumigation operations will be equipped with a protective mask provided with an adequate filter against the gas in question.

The inhabitants of neighbouring buildings must be advised regarding the irritant action of ' Tritox ' and the protective measures to be adopted if necessary.

The premises to be treated must be hermetically sealed and have warning notices posted on the outside. On conclusion of operations the said premises cannot be replaced at the disposal of the occupiers until they have been well aired for at least half an hour and until the supervisor responsible has ascertained that the air inside the premises no longer causes irritation to the eyes. (*Ibid.*, S. 73-74).

*** By another Decree, dated February 2, 1941, the previsions regulating the use of very poisonous preparations for parasitic control are extended to former Austria (Ostmark) and to the Sudeten Territory. (*Ibid.*, S. 76).

*** A Decree of February 12, 1941 contains very detailed provisions regarding the practical application of the Decree dated December 19, 1940 relative to the anti-phylloxera campaign in Alsace [see this *Bulletin*, p. 94].

The central superintendence of the Anti-phylloxera Service is entrusted to the Colmar Experiment Station.

A list is given of the 9 varieties of American vines authorized for the production of stocks.

Those persons who, at the time of the coming into force of the Decree of December 19, 1940 owned American vines intended for the production of

stocks, are required to give notification of same. The competent authorities have the right to demand the destruction of all plants not belonging to one of the varieties authorized. An adequate indemnity will be granted.

The establishments engaged in the production and sale of grafted vines must renew every year before February 1, their application for the license without which they cannot continue. This license will only be granted under the conditions precisely stated in this Decree. All control operations, moreover, must be carried out with the necessary care and under the supervision of the Anti-phylloxera Service. (*Ibid.*, S. 78-83).

*** By Decree dated February 14, 1941, the provisions regulating the control of potato wart disease [*Synchytrium endobioticum*] are extended to former Austria (Ostmark) and the Sudeten Territory. It is a question of the application of the Decrees of October 8, 1937 and April 29, 1939 [see this *Bulletin*, 1938, No. 2, pp. 28-29 and 1939, No. 9, pp. 210-211]. (*Ibid.*, S. 77).

*** A Circular of February 25, 1941, requests those engaged in the cultivation of greenhouse crops, for the control of parasites damaging the plants in question, to use as much as possible calcium cyanide ('Cyanogas') in place of products which, under present circumstances, are difficult to obtain.

In view of a more generalized use of this toxic gas, the number of institutions and establishments officially authorized to instruct those persons who will have made application, with regard to the mode of procedure to be employed in using this product will have to be increased.

Henceforth, besides the district Services for plant protection and the research, experiment and horticultural instruction organizations, authorization for instruction will also be granted to the establishments officially recognized to carry out fumigation operations by means of hydrocyanic acid gas and the horticultural concerns authorized to employ calcium cyanide for their own requirements.

The regulations regarding the use of calcium cyanide for the disinfection of greenhouses have been drawn up with the assistance of the Central Bureau of Plant Protection.

The tax to be paid for official recognition as instructor has been reduced to RM 3, applying equally to all parts of the country. (*Ibid.*, S. 74-75).

Germany (Bavaria). – Decree of January 10, 1941 renders the control of the corn weevil [*Calandra granaria*] and other insect pests of stored cereals compulsory. Control measures are to be carried out according to the instructions of the official Plant Protection Service. (*Amtliche Pflanzenschutzbestimmungen*, Berlin, 1. Februar 1941, Bd. XIII, Nr. 1, S. 7-8).

*** Notification dated January 10, 1941 establishes that the aforesaid Decree may be published and come into force as soon as requested by the Plant Protection Service. It will be abrogated when the said authority considers that the results obtained no longer necessitate its application. (*Ibid.*, S. 8).

Germany (Protectorate of Bohemia and Moravia). — By Decree No. 69 of October 19, 1940, come into force on February 20, 1941, the production of and trade in seed potatoes has been newly regulated. (*Nachrichtenblatt für den Deutschen Pflanzenschutzdienst*, Berlin, Anfang März 1941, 21. Jahrg., Nr. 3, S. 23).

*** By Notification dated November 26, 1940, deciduous fruit and ornamental trees, as well as the green parts (shoots, cuttings, etc.) of these plants, intended for planting, must, before being allowed through the frontier into Germany, be treated with hydrocyanic acid gas. Treatment will be carried out by the Plant Protection Services of Prague and Brünn for Bohemia and Moravia respectively.

Dispatch of the above-indicated plants is only authorized when consignments are accompanied by a certificate testifying that disinfection has taken place conformably with the regulations established. (*Amtliche Pflanzenschutzbestimmungen*, Berlin, 1. Februar 1941, Bd. XIII, Nr. 1, S. 15-16).

Germany (Württemberg). — By Decree of December 9, 1940, the control of cockchafers [*Melolontha*] is made compulsory in agricultural areas.

The administrative authorities, in agreement with the official Plant Protection Service, will decide when control operations should be commenced, and will delimit the control zone and indicate the methods to be adopted by those concerned under the supervision of the said authorities. (*Amtliche Pflanzenschutzbestimmungen*, Berlin, 1. Februar 1941, Bd. XIII, Nr. 1, S. 12-13).

Argentine Republic. — Decree No. 76.806 of November 13, 1940 modifies the regulation relative to the certification of seed potatoes.

Tubers produced from the controlled crops of plant breeders in the regions for seed potatoes fixed by Decree No. 66.013 of June 26, 1940 will be authorized provided that the part attacked by *Actinomyces scabies* and *Rhizoctonia solani* does not exceed a third of the tuber. Tubers having a hollow centre, showing internal discoloration, or affected with dry or wet rot will be rejected. (*Boletín Oficial de la República Argentina*, Buenos Aires, 3 de diciembre de 1940, año XLVIII, núm. 13.891, pág. 16575).

Italy. — The Ministry of Agriculture and Forests has published the list of communes in the Kingdom declared to be infested or suspected of being infested by grape phylloxera on December 31, 1940. (*Bollettino Ufficiale del Ministero dell'Agricoltura e delle Foreste*, Roma, 1-11 marzo 1941, anno XIX, nn. 7-8, pp. 381-398).

*** By Circular No. 14 of February 5, 1941, the Minister of Agriculture and Forests has requested the Royal Research and Scientific Experiment Institutes for Plant Pathology and Agricultural Entomology as also the Royal Observatories for Plant Diseases to collaborate actively with the *International Bulletin of Plant Protection*.

The notes and communications regarding discoveries and current events reported in the country and prepared by the staff of these organizations will be transmitted to the International Institute of Agriculture by the Royal Station of Plant Pathology, Rome, official correspondent of the said Institute. (*Ibid.*, pp. 410-411).

Peru. — By Resolution dated August 28, 1940, the fruit-growers of the Tacna Valley are obliged to uproot all guavas [*Psidium guajava*], cherimoyas [*Anona cherimolia*], ' pacaes ' [*Inga feuillei*], rose-apple [*Eugenia jambos*] and loquats [*Eriobotrya japonica*] so that the fruit fly [*Anastrepha*] will not find any fruit available in which to deposit its eggs.

During the period June to September inclusive, these fruit-growers are also required to collect and destroy the apples, oranges and pears on their respective lands. (*El Peruano*, Lima, 15 de noviembre de 1940, año 100, tomo II, trimestre IV, núm. 256, pág. [1041]).

*** Another Resolution of the same date declares the fruit-tree bark beetle (*Scolytus rugulosus*) found in the Tacna Valley to be a pest of the orchards of the country.

The transport into other valleys of the country of grafts or seedlings of the plum, apple, almond and cherry is prohibited.

The trees attacked by this beetle must be carefully pruned, the cut branches are to be burnt and the trunks and ligneous branches coated with lime twice a year. (*Ibid.*).

Union of South Africa. — By Proclamation No. 26 of February 6, 1940, Proclamation No. 201 of 1937 [see this *Bulletin*, 1938, No. 6, p. 129] relative to restrictions for prevention of spread of citrus canker [*Bacterium citri*] is amended by the insertion in sub-paragraph (ii) of paragraph (*a*) after the word " Cheringoma " of the words " nor to citrus fruit from the territory known as ' Provincia do Sul do Save ' comprising the districts of Lourenço Marques and Inhambane in Portuguese East Africa ". (*The Union of South Africa Government Gazette*, Pretoria, 16 February, 1940, Vol. CXIX, No. 2733, p. 394).

*** By Proclamation No. 27 of same date on account of the citrus canker the Schedule to Proclamation No. 286 of 1936 [see this *Bulletin*, 1937, No. 5, pp. 99-102], as amended by Proclamation No. 202 of 1937 [see this *Bulletin*, 1938, No. 6, p. 130], is further amended by the addition to paragraph 1 of the following new sub-paragraph:—

" (i) Any citrus fruit from the territory known as ' Provincia do Sul do Save ' comprising the districts of Lourenço Marques and Inhambane in Portuguese East Africa, unless each consignment is accompanied by an official certificate signed by an officer of the Department of Agriculture, Lourenço Marques, stating the name and address of the grower, the name of the farm or property on which the citrus fruit was produced and the district in which such farm or property is situated ". (*Ibid.*, p. 395).

*** By Proclamation No. 48 of March 4, 1940 relative to restrictions on importation of potatoes, the Schedule to the said Proclamation No. 286 of 1936, as amended by Proclamation No. 155 of 1939 [see this *Bulletin*, 1940, No. 1, p. 11], is amended by the deletion of sub-paragraph (*c*) of paragraph (2) of clause 4 thereof. (*Ibid.*, 15 March, 1940, No. 2741, p. [701]).

RECENT BIBLIOGRAPHY

AINSWORTH, G. C. The identification of certain viruses found infecting leguminous plants in Great Britain. *The Annals of Applied Biology*, Cambridge, 1940, Vol. 27, No. 2, pp. 218-226, pls. 10-11. References, p. 225.

ALTEN, F., und ORTH, H. Untersuchungen über den Aminosäurengehalt und die Anfälligkeit der Kartoffel gegen die Kraut- und Knollenfäule (*Phytophthora infestans* de By.). *Phytopathologische Zeitschrift*, Berlin 1940, Bd. XIII, Heft 3, S. [243]-271, Abb. 1-18. Schriftenverzeichnis, S. 270-271.

BAILEY, Stanley F. The distribution of injurious thrips in the United States. *Journal of Economic Entomology*, Menasha, Wisconsin, 1940, Vol. 33, No. 1, pp. 133-136, fig. 1.

BAKER, R. E. D. The influence of climatic factors on citrus scab disease. *Tropical Agriculture*, Trinidad, B. W. I., 1940, Vol. XVII, No. 5, pp. 83-86. References, p. 86.
[*Elsinoe citri*].

BAKER, R. E. D. Distribution of fungous diseases of crop plants in the Caribbean region. *Tropical Agriculture*, Trinidad, B. W. I., 1940, Vol. XVII, No. 5, pp. 90-94.

BARNES, Dwight F., and KALOOSTIAN, George H. Flight habits and seasonal abundance of dried-fruit insects. *Journal of Economic Entomology*, Menasha, Wisconsin, 1940, Vol. 33, No. 1, pp. 115-119, fig. 1.

BEILIN, I. G. Concerning control measures against Orobanche cumana Wallr. on sunflower. *Bulletin of Plant Protection*, Moscow-Leningrad, 1940, No. 3, pp. 94-[104], figs. 1-4. [Bibliography], p. [104].
[In Russian, with title also in English].

BELOVA, O. D. Ring rot of potato and methods of control. Breeding. *Proceedings of the Lenin Academy of Agricultural Sciences of U. S. S. R.*, Moscow, 1940, issue 19, pp. 21-[26], figs. 1-3. [Bibliography], pp. 25-[26].
[In Russian, with title also in English. — *Bacterium sepedonicum*].

BERAN, Ferdinand. Zur Frage der insektiziden Wirksamkeit von Obstbaumkarbolineum emulgiert. *Nachrichtenblatt für den Deutschen Pflanzenschutzdienst*, Berlin 1940, 20. Jahrg., Nr. 7, S. [33]-35. Schrifttum, S. 35.
[Experiments on the control of *Aspidiotus perniciosus*].

BERAN, Ferdinand. Versuche zur Blausäurebegasung von Baumschulmaterial. Ein Beitrag zur Bekämpfung der San-José-Schildlaus (*Aspidiotus perniciosus* Comst.). *Nachrichtenblatt für den Deutschen Pflanzenschutzdienst*, Berlin 1940, 20. Jahrg., Nr. 8, S. [41]-44. Schrifttum, S. 44.

BEREZINA, V. M. A fragment to the method of investigating the part played by the light in the life of insects. *Bulletin of Plant Protection*, Moscow-Leningrad, 1940, No. 3, pp. 37-[38].
[In Russian, with title also in English].

BERG, Anthony. A rust-resistant red cedar. *Phytopathology*, Lancaster, Pa., 1940, Vol. 30, No. 10, pp. 876-878, fig. 1.
[*Juniperus virginiana* and *Gymnosporangium juniperi-virginianae*].

BERKELEY, G. H., and KOCH, L. W. Diseases of tobacco in Canada. *Dominion of Canada, Department of Agriculture, Division of Botany, Science Service, Publication 667, Farmers' Bulletin 85*, First printing. Ottawa, Canada, 1940, 29 pp., 19 figs.

BERNHARDT, E. Getreidelagerung und Kornkäferbekämpfung auf Bauernspeichern. *Die kranke Pflanze*, Dresden 1940, 17. Jahrg., Heft 5/6, S. [41]-45.
[*Calandra granaria*].

BRIZGALOVA, V. A. Some data about a type of virus diseases (Zakooklivanije) of oats in the conditions of the Baikal-Lake region. *Bulletin of Plant Protection*, Moscow-Leningrad, 1940, No. 3, pp. 124-[129].
[In Russian, with title also in English].

BROGIONI, Domenico. Una "mummificazione" del cotone causata da Alternaria. *Fibre Tessili*, Roma, 1940, 3ª annata, n. 11, pp. 297-298, 2 figg.

CAESAR, L. Fifty years of entomological progress, Part II, 1899 to 1909. *Journal of Economic Entomology*, Menasha, Wisconsin, 1940, Vol. 33, No. 1, pp. 15-21.

CANDURA, Giuseppe. Lotta contro i rodilegno. Dei vari sistemi in uso e di un nuovo mezzo pratico ed efficace. *L'Ortofrutticoltura Italiana*, Roma, 1940, anno IX, n. 1, pp. 13-15.
[*Cossus cossus* and *Zeuzera pyrina*].

CASS-SMITH, W. P. Black spot or scab of apples. Serious new outbreaks recorded in the Albany and Manjimup districts. *Journal of the Department of Agriculture of Western Australia*, Perth, 1940, Vol. 17 (Second Series), No. 1, pp. 56-67, pls. I-VI. Literature cited, p. 67.
[*Venturia inaequalis*].

CASTELLANI, Ettore. Su due malattie del cartamo osservate nell'altopiano etiopico. *L'Agricoltura Coloniale*, Firenze, 1940, anno XXXIV, n. 8, pp. [331]-338, figg. 1-8. [Bibliografia], p. 338.
[*Puccinia carthami* and *Cercosporella carthami* on *Carthamus tinctorius*].

CHANDLER, S. C. Mounding peach trees following applications of ethylene dichloride emulsion and of paradichlorobenzene crystals. *Journal of Economic Entomology*, Menasha, Wisconsin, 1940, Vol. 23, No. 1, p. 199.

CHANDLER, S. C. Control of black peach aphis. *Journal of Economic Entomology*, Menasha, Wisconsin, 1940, Vol. 33, No. 1, p. 204.
[*Anuraphis persicae-niger*].

CHILTON, St. John P. Delayed reduction of the diploid nucleus in promycelia of Ustilago zeae. *Phytopathology*, Lancaster, Pa., 1940, Vol. 30, No. 7, pp. 622-623, fig. 1.

COOPER, Kenneth W. Relations of Pediculopsis graminum and Fusarium poae to central bud rot of carnations. *Phytopathology*, Lancaster, Pa., 1940, Vol. 30, No. 10, pp. 853-859. Literature cited, p. 859.
[It is proven that the mite *Pediculopsis graminum* can and does introduce *Fusarium poae* into carnation buds, producing central bud rot].

COWAN, F. T., and SHIPMAN, H. J. Control of the Mormon cricket by the use of poisoned bait. *United States Department of Agriculture, Circular No. 575*, Washington, D. C., 1940, 15 pp., 3 figs.
[*Anabrus simplex*].

DANA, B. F. Occurrence of big bud of tomato in the Pacific Northwest. *Phytopathology*, Lancaster, Pa., 1940, Vol. 30, No. 10, pp. 866-869, figs. 1-3. Literature cited, p. 869.
[A virus disease].

DEEV, S. S. A test of a control measure against Melolontha hippocastani applying poisons by dusting. *Bulletin of Plant Protection*, Moscow-Leningrad, 1940, No. 3, pp. 67-[72], fig. 1. [Bibliography], p. [72].
[In Russian, with title also in English].

DÉFAGO, G. Effets de l'aneurine, de ses composants et de l'hétéro-auxine sur la croissance de trois parasites du blé. *Phytopathologische Zeitschrift*, Berlin 1940, Bd. XIII, Heft 3, S. [293]-315, fig. 1-5. Publications citées, S. 314-315.
[*Tilletia tritici*, *Cercosporella herpotrichoides*, *Ophiobolus herpotrichus*].

DOMBROWSKI, H. V. Eine neue Cecidomyiden-Art Silvestrina tyrophagi Feind der Tyrophagus noxius. *Bulletin of Plant Protection*, Moscow-Leningrad, 1940, No. 3, pp. 87-[88], figs. 1-5.
[In Russian, with title and summary also in German].

EBELING, Walter. Toxicants and solids added to spray oil in control of California red scale. *Journal of Economic Entomology*, Menasha, Wisconsin, 1940, Vol. 33, No. 1, pp. 92-102, figs. 1-10. Literature cited, p. 102.
[*Aonidiella aurantii*].

EDMUNDSON, W. C. The effect of psyllid injury on the vigor of seed potatoes. *American Potato Journal*, Somerville and New Brunswick, N. J., 1940, Vol. 17, No. 12, pp. [315]-317. Literature cited, p. 317.
[*Paratrioza cockerelli*].

EGOROVA, E. About the reiterated hibernation of *Apion apricans* Herbst. *Bulletin of Plant Protection*, Moscow-Leningrad, 1940, No. 3, pp. 35-[36].
[In Russian, with title also in English].

EHRLICH, John, and OPIE, Robert S. Mycelial extent beyond blister rust cankers on Pinus monticola. *Phytopathology*, Lancaster, Pa., 1940, Vol. 30, No. 7, pp. 611-620, fig. 1. Literature cited, p. 620.
[*Cronartium ribicola*].

EICHMANN, R. D. The pea aphid on canning peas in eastern Washington as influenced by alfalfa planting. *Journal of Economic Entomology*, Menasha, Wisconsin, 1940, Vol. 3, No. 1, pp. 137-139, figs. 1-5.
[*Illinoia pisi*].

ELAGO, L. F. About the utilisation of Silvestrina tyrophagi Dombr. as a control measure against Tyrophagus noxius L. *Bulletin of Plant Protection*, Moscow-Leningrad, 1940, No. 3, pp. 85-[86].
[In Russian, with title also in English].

ERMOLAEV, M. F. The biology of Thrips linarius Uz. and control measures against it. *Bulletin of Plant Protection*, Moscow-Leningrad, 1940, No. 3, pp. 23-[34], figs. 1-6. [Bibliography], p. [34].
[In Russian, with title also in English].

ESSIG, E. O. Fifty years of entomological progress, Part IV, 1919 to 1929. *Journal of Economic Entomology*, Menasha, Wisconsin, 1940, Vol. 33, No. 1, pp. 30-58. Literature cited, pp. 44-58.

ESSIG, E. O. Some South Sea Island aphids. *Journal of Economic Entomology*, Menasha, Wisconsin, 1940, Vol. 33, No. 1, pp. 200-201. Literature cited, p. 201.
[*Aphis citricidus, A. gossypii, A. maydis, A. sacchari, Toxoptera aurantii, Pentalonia nigronervosa, Idiopterus nephrolepidis, Myzus persicae, Hyalopterus arundinis*].

FERGUSON, George R. Life history of the western strawberry leaf roller with notes on its control. *Journal of Economic Entomology*, Menasha, Wiconsin, 1940, Vol. 33, No. 1, pp. 121-123. Literature cited, p. 123.
[*Anacampsis fragariella*].

FINKENBRINK, W. Versuche über das Fortbewegungsvermögen der Eilarven des Hausbocks (*Hylotrupes bajulus* L.). *Anzeiger für Schädlingskunde*, Berlin 1940, XVI. Jahrg., Heft 4, S. 41-43. Schrifttum, S. 43.

FINKENBRINK, W. Neue Insektizide. *Anzeiger für Schädlingskunde*, Berlin 1940, XVI. Jahrg., Heft 6, S. 69-67. Schrifttum, S. 66-67.

FLANDERS, Stanley E. A Brazilian parasite of *Pseudococcus maritimus* (Ehrh.). *Journal of Economic Entomology*, Menasha, Wisconsin, 1940, Vol. 33, No. 1, p. 201. Literature cited.
[*Aenasius paulistus*].

FLANDERS, S[tanley] E. A Coccinellid introduced into California. *Journal of Economic Entomology*, Menasha, Wisconsin, 1940, Vol. 33, No. 1, pp. 202-203. Literature cited, p. 203.
[*Scymnus flavifrons*].

FRAMPTON, Vernon L. The refractory diffusion method of Lamm and a modified Ostwald viscometer, as used in a study of the tobacco mosaic virus protein. *Phytopathologische Zeitschrift*, Berlin 1940, Bd. XIII, Heft 2, S. [272]- 281, figs. 1-10.

GARRETT, S. D. Soil conditions and the take-all disease of wheat. V. Further experiments on the survival of *Ophiobolus graminis* in infected wheat stubble buried in the soil. *The Annals of Applied Biology*, Cambridge, 1940, Vol. 27, No. 2, pp. 199-204. References, p. 204.

GASSNER, Gustav. Untersuchungen über das Citrus-Sterben von Dörtyol oder die Gelbnervigkeit der Citrusbäume. *Phytopathologische Zeitschrift*, Berlin 1940, Bd. XIII, Heft 2, S. [97]-125, Abb. 1-31.
[The chief cause of 'Gelbnervigkeit' is the excessive planting depth of citrus trees; the same is true of very close planting].

GILJAROV, M. Resistance of Vicia pannonica to the injuries caused by Sitona spp. *Bulletin of Plant Protection*, Moscow-Leningrad, 1940, No. 3, pp. 39-[40].
[In Russian, with title also in English].

GILMAN, Joseph C., and MCNEW, G. L. Fungi associated with tree cankers in Iowa. II. Diaporthe, Apioporthe, Cryptodiaporthe, Pseudovalsa and their related conidial forms. *Iowa State College Journal of Science*, Ames, Iowa, 1940, Vol. XIV, No. 2, pp. 129-153, pls. I-V. Literature cited, pp. 143-144.

GIMINGHAM, C. T. Some recent contributions by English workers to the development of insect control. *The Annals of Applied Biology*, Cambridge, 1940, Vol. 27, No. 2, pp. [161]-175. References, pp. 173-175.

GNADINGER, C. B., MOORE, J. B., und COULTER, R. W. Experiments with pyrethrum for the control of codling moth (*Carpocapsa pomonella* L.). *Journal of Economic Entomology*, Menasha, Wisconsin, 1940, Vol. 33, No. 1, pp. 143-153, figs. 1-7. Literature cited, pp. 152-153.

GOETSCH, W. (Gemeinsam mit I. Simmersbach und I. von Spaun). Beiträge zur Bekämpfung von Ameisen-Staaten. I. Teil. *Zeitschrift für angewandte Entomologie*, Berlin 1940, Bd. XXVII, Heft 2, S. [273]-320, Abb. 1-3, Kurven I-III. Literatur, S. 320.

GONTARSKI, Hugo. Beitrag zur Honigtaufrage. *Zeitschrift für angewandte Entomologie*, Berlin 1940, Bd. XXVII, Heft 2, S. [321]-332, Abb. 1-6. Schrifttum, S. 332.

GOODHUE, Lyle D. Particle size of commercial lead arsenate by sedimentation analysis. *Journal of Economic Entomology*, Menasha, Wisconsin, 1940, Vol. 33, No. 1, pp. 170-173. Literature cited, pp. 172-173.

GRACE, N. H. The effect of nutrient salts in organic mercurial seed disinfectants on the germination and early growth of wheat. *Canadian Journal of Research*, Ottawa, Canada, 1940, Vol. 18, No. 5, pp. [151]-157. References, p. 157.

GRAY, K. W., and SCHUH, Joe. Pea aphid control experiments in Oregon. *Journal of Economic Entomology*, Menasha, Wisconsin, 1940, Vol. 33, No. 1, pp. 72-77, fig. 1.
[*Illinoia pisi*].

GREIS, Hans. Ein Wurzelbrand an der Zuckerrübe verursacht durch *Alternaria tenuis*. *Phytopathologische Zeitschrift*, Berlin 1940, Bd. XIII, Heft 2, S. [196]-206, Abb. 1-7. Schriftenverzeichnis, S. 206.

GRÜTTE, E. Rhizoctonia solani K. als Schädling der Kartoffelknolle. *Zeitschrift für Pflanzenkrankheiten (Pflanzenpathologie) und Pflanzenschutz*, Stuttgart 1940, 50. Jahrg., Heft 5, S. [225]-230, Abb. 1-8. Schrifttum, S. 230.

HAEUSSLER, G. J. General information concerning the oriental fruit moth in Japan and Chosen. *Journal of Economic Entomology*, Menasha, Wisconsin, 1940, Vol. 33, No. 1, pp. 189-193, fig. 1. Literature cited, p. 193.
[*Grapholitha molesta*].

HANF, M. Der Erdbeerstengelstecher, ein für Deutschland neuer Schädling. *Die kranke Pflanze*, Dresden 1940, 17. Jahrg., Heft 5/6, S. 45-48, Abb. 1-5.
[*Rhynchites germanicus*].

HANSBERRY, Roy. A new pest of hollyhock (*Anthomyza angelicae* Frost). *Journal of Economic Entomology*, Menasha, Wisconsin, 1940, Vol. 33, No. 1, pp. 199. Literature cited.

HANSBERRY, Roy, and CHIU, Shin Foon. Presentation of time-dosage-mortality data by three-dimensional graphs. *Journal of Economic Entomology*, Menasha, Wisconsin, 1940, Vol. 33, No. 1, pp. 139-141, figs. 1-3. Literature cited, p. 141.
[*Tribolium confusum*].

HASKELL, R. J., and BARKER, H. D. Cottonseed treatment. *U. S. Department of Agriculture, Leaflet No. 198*, Washington, D. C., 1940, 8 pp., 3 figs.

HAWKER, Lilian E. Experiments on the control of basal rot of narcissus bulbs caused by *Fusarium bulbigenum* Cke. & Mass. With notes on *Botrytis narcissicola* Kleb. *The Annals of Applied Biology*, Cambridge, 1940, Vol. 27, No. 2, pp. 205-217, References, p. 217.

HEINZE, K., und KÖHLER, E. Die Mosaikkrankheit der Sojabohne und ihre Übertragung durch Insekten. *Phytopathologische Zeitschrift*, Berlin 1940, Bd. XIII, Heft 3, S. [207]-242, Abb. 1-16. Schriftenverzeichnis, S. 242.

HENSILL, G. S. Determination of mineral oil deposits on plant surfaces in field and laboratory. *Journal of Economic Entomology*, Menasha, Wisconsin, 1940, Vol. 33, No. 1, pp. 155-159. Literature cited, p. 159.

HENSON, Lawrence, and WALLEAU, W. D. The production of apothecia of Sclerotinia sclerotiorum and S. trifoliorum in culture. *Phytopathology*, Lancaster, Pa., 1940, Vol. 30, No. 10, pp. 869-873, fig. 1. Literature cited, p. 873.

HEUBERGER, John W. A laboratory biological assay of tenacity of fungicides. *Phytopathology*, Lancaster, Pa., 1940, Vol. 30, No. 10, pp. 840-847, fig. 1. Literature cited, p. 847.

HORSFALL, J. G., HEUBERGER, J. W., SHARVELLE, E. G., and HAMILTON, J. M. A design for laboratory essay of fungicides. *Phytopathology*, Lancaster, Pa., 1940, Vol. 30, No. 7, pp. 545-563, figs. 1-4. Literature cited, pp. 562-563. [*Macrosporium sarcinaeforme* is suggested as an indicator fungus that requires no artificial stimulant].

JACKSON, L. W. R. Effects of H-ion and Al-ion concentrations on damping- off of conifers and certain causative fungi. *Phytopathology*, Lancaster, Pa., 1940, Vol. 30, No. 7, pp. 563-579, figs. 1-3. Literature cited, pp. 578-579. [*Pythium, Rhizoctonia*].

JANCKE, O. Die Frostkatastrophe 1938 und ihr Einfluss auf den Schädlingsbefall im Obst- und Weinbau. *Anzeiger für Schädlingskunde*, Berlin 1940, XVI. Jahrg., Heft 4, S. 39-41. Schrifttum, S. 41.

JANCKE, O. Versuche zur Winterbekämpfung des Springwurms und der Kräuselmilbe. *Zeitschrift für Pflanzenkranheiten (Pflanzenpathologie) und Pflanzenschutz*, Stuttgart 1940, 50. Bd., Heft 6, S. 309-314. Schrifttum, S. 313-314. [*Sparganothis pilleriana* and *Epitrimerus vitis*].

JOESSEL, P.-H. Les traitements mixtes des arbres fruitiers dans la basse vallée du Rhône. Etat actuel de la question. *Le Progrès Agricole et Viticole*, Montpellier, 1940, 61e année, nº 19, p. 390-393.

JOHNSON, C. G. The maintenance of high atmospheric humidities for entomological work with glycerol-water mixtures. *The Annals of Applied Biology*, Cambridge, 1940, Vol. 27, No. 2, pp. 295-299, figs. 1-2. References, p. 299.

JOHNSON, H. W., LEFEBVRE, C. L., and AYERS, T. T. Powdery mildew of lespedeza. *Phytopathology*, Lancaster, Pa., 1940, Vol. 30, No. 7, pp. 620-621, fig. 1. [*Microsphaera diffusa*].

JOHNSON, L. R. On the stem and bulb eelworm (*Anguillulina dipsaci* Kühn) with special reference to its occurrence on weeds of arable land. *The Annals of Applied Biology*, Cambridge, 1940, Vol. 27, No. 2, pp. 248-251. References, p. 251.

KERN, Frank D., and THURSTON, Jr., H. W. A further report on the Uredinales of Colombia. *Mycologia*, Lancaster, Pa., 1940. Vol. XXXII, No. 5, pp. 621-629.

KISSELEVA, E. N. Corn-bugs Eurygaster maurus and Aelia acuminata in the conditions of the Gorki Region. *Bulletin of Plant Protection*, Moscow-Leningrad, 1940, No. 3, pp. 41-[43].
[In Russian, with title also in English].

KLAUS, Horst. Untersuchungen über *Alternaria solani* Jones et Grout, insbesondere über seine Pathogenität an Kartoffelknollen in Abhängigkeit von den Aussenfaktoren. *Phytopathologische Zeitschrift*, Berlin 1940, Bd. XIII, Heft 2, S. [126]-195, Abb. 1-15. Schriftenverzeichnis, S. 192-195.

KLEBAHN, H. Eine zu völliger Unkenntlichkeit führende Veränderung des roten Fingerhuts (Digitalis purpurea) und Erörterungen über ihre Ursache. *Zeitschrift für Pflanzenkrankheiten (Pflanzenpathologie) und Pflanzenschutz*, Stuttgart 1940, 50. Bd., Heft 6, S. [273]-297, Abb. 1-22. Literatur, S. 294-297. [*Eriophyes*].

KNOWLTON, G. F. The European earwig in Utah. *Journal of Economic Entomology*, Menasha, Wisconsin, 1940, Vol. 33, No. 1, p. 204.
[*Forficula auricularia*].

KOEGEL, A. "Monumente", Frequenzen und Schädlingsbekämpfung. *Anzeiger für Schädlingskunde*, Berlin 1940, XVI. Jahrg., Heft 6, S. 67-69.

KOODRIAVZEVA, M. A. The connection of the fermentative activity of wheat to the rate of its resistance to brown rust. *Bulletin of Plant Protection*, Moscow-Leningrad, 1940, No. 3, pp. 105-[115]. [Bibliography], p. [115].
[In Russian, with title also in English. — *Puccinia triticina*].

KOUPREVIC, V. F. Sur l'origine et l'évolution du parasitisme chez les champignons. *Sovietskaia Botanika*, Moscou-Leningrad, 1940, nº 5-6, p. [270]-287. [Bibliographie], p. 286-287.
[In Russian, with title also in French].

KOVACHEVSKY, Iv. Chr. Die Reisigkrankheit der Paprikapflanze (Capsicum annuum). Vorläufige Mitteilung. *Zeitschrift für Pflanzenkrankheiten (Pflanzenpathologie) und Pflanzenschutz*, Stuttgart 1940, 50. Bd., Heft 6, S. 298-308, Abb. 1-9. Literatur, S. 308.
[A virus disease].

KOZHANCHIKOV, I. V. The importance of the physical conditions of environment upon the development of the eggs of the gipsy moth (Lymantria dispar L.). *Bulletin of Plant Protection*, Moscow-Leningrad, 1940, No. 3, pp. 3-[16], figs. 1-5. [Bibliography], pp. 15-[16].
[In Russian, with title also in English].

KRAITER, A. D. About the cause of the toxic effect of emulsions of petroleum oils upon fruit trees at the time of their vegetation. *Bulletin of Plant Protection*, Moscow-Leningrad, 1940, No. 3, pp. 54-[66]. [Bibliography], p. [66].
[In Russian, with title also in English].

LAMAS, José Mariano, und MEUCHE, Alfred. Larven der Grasfliege *Opomyza florum* Fabr. und anderer Dipteren im Wintergetreide bei Bonn. *Anzeiger für Schädlingskunde*, Berlin 1940, XVI. Jahrg., Keft 7, S. 75-78, Abb. 1. Schrifttum, S. 78.

LANDIS, B. J., and HOWARD, N. F. Paradexodes epilachnae, a tachinid parasite of the Mexican been beetle. *United States Department of Agriculture, Technical Bulletin No. 721*, Washington, D. C., 1940, 31 pp., 23 figs.
[*Paradexodes epilachnae*, a parasite of *Epilachna varivestis*].

LANGE, Jr., W. H. Tests with methyl bromide as a fumigant for larvae of the artichoke plume moth. *Journal of Economic Entomology*, Menasha, Wisconsin, 1940, Vol. 33, No. 1, pp. 66-69, figs. 1-4. Literature cited, p. 69.
[*Platyptilia carduidactyla*].

LATTA, Randall. Methyl bromide fumigation for destruction of pod borer larvae. *Journal of Economic Entomology*, Menasha, Wisconsin, 1940, Vol. 33, No. 1, pp. 176-179.
[*Maruca testulalis*].

LEHMAN, S. G. Cotton seed dusting in relation to control of seedling infection by Rhizoctonia in the soil. *Phytopathology*, Lancaster, Pa., 1940, Vol. 30, No. 10, pp. 847-853. Literature cited, p. 853.

LEIB, Edm. Wolläuse an Ziergewächsen. *Die kranke Pflanze*, Dresden 1940, 17. Jahrg., Heft 5/6, S. 48-51, Abb. 1-3.
[*Phyllaphis fagi, Pemphigus (Prociphilus) xylostei, Chermes viridis*].

LEONHARDT, Hans. Beiträge zur Kenntnis der Lachniden, der wichtigsten Tannenhonigtauerzeuger. *Zeitschrift für angewandte Entomologie*, Berlin 1940, Bd. XXVII, Heft 2, S. [208]-272, Abb. 1-23, 4 Klimatogr. Literaturverzeichnis, S. 271-272.

LEWIS, Ralph W. A method of inducting spore production by Cercospora apii Fres. in pure culture. *Phytopathology*, Lancaster, Pa., 1940, Vol. 30, No. 7, p. 623.

LING, Lee. Factors affecting spore germination and growth of Urocystis occulta in culture. *Phytopathology*, Lancaster, Pa., 1940, Vol. 30, No. 7, pp. 579-591, figs. 1-2. Literature cited, p. 591.

LIVINGSTONE, E. M., and SWANK, George R. Activities of the adult white-fringed beetle in New Orleans and vicinity from September 1938 to May 1939. *Journal of Economic Entomology*, Menasha, Wisconsin, 1940, Vol. 33, No. 1, pp. 203-204. Literature cited, p. 204.
[*Pantamorus leucoloma*].

LONGRÉE, Karla. Chalaropsis thielavioides, cause of "black mold" of rose grafts. *Phytopathology*, Lancaster, Pa., 1940, Vol. 30, No. 10, pp. 793-807, figs. 1-9. Literature cited, p. 807.

LUTTRELL, E. S. Morenoella quercina, cause of leaf spot of oaks. *Mycologia*, Lancaster, Pa., 1940, Vol. XXXII, No. 5, pp. 652-666, figs. 1-13. Bibliography, pp. 665-666.

MAGEE, C. J. P. Pathological changes in the phloem and neighbouring tissues of the banana (*Musa Cavendishii* Lamb.) caused by the bunchy-top virus. *Department of Agriculture, New South Wales, Science Bulletin No. 67*, Sydney, 1940, 32 pp., 30 figs. Literature citations, p. 32.

MANIS, H. C., and LEFFERT, Ila. Preliminary studies on the comparative value of some sprays and dusts in potato insect control. *Iowa State College Journal of Science*, Ames, Iowa, 1940, Vol. XIV, No. 2, pp. 155-161, figs. 1-3. Literature cited, p. 163.
[The most numerous insect pests of potatoes in Iowa are *Empoasca fabae*, *Leptinotarsa decemlineata*, *Epitrix cucumeris* and aphids, mainly *Myzus persicae*].

MARANI, M., GERBALDI, C., GOIA, G., BRIOLINI, M. Ricerche sull'efficacia dell'arseniato di alluminio nella lotta contro il verme delle mele (*Laspeyresia pomonella* L.). *Rivista di Frutticoltura*, Ravenna, 1940, vol. 4°, n. 2, pp. [57]-63, figg. 1-3. [With summaries in French, English and German].

MARLATT, C. L. Fifty years of entomological progress, Part I, 1889 to 1899. *Journal of Economic Entomology*, Menasha, Wisconsin, 1940, Vol. 33, No. 1, pp. 8-15.

MARSAIS, P[aul]. Nouveaux résultats obtenus dans la lutte contre cochylis et eudémis par la méthode biologique. *Revue de Viticulture*, Paris, 1940, 47e année, tome XCII, n° 2.396, p. [255]-259.
[*Clysia ambiguella*, *Polychrosis botrana*].

MARSHALL, G. Edw. Some newly discovered habits of the codling moth. *Journal of Economic Entomology*, Menasha, Wisconsin, 1940, Vol. 33, No. 1, p. 200.
[*Cydia pomonella*].

MARTIN, J. T. The problem of the evaluation of rotenone-containing plants. V. The relative toxicities of different species of Derris. *The Annals of Applied Biology*, Cambridge, 1940, Vol. 27, No. 2, pp. 274-294, fig. 1. References, p. 294.

MASON, Preston W. A revision of the North American aphids of the genus Myzus. *United States Department of Agriculture, Miscellaneous Publication No. 371*, Washington, D. C., 1940, 30 pp., 7 figs. Literature cited, pp. 21-22.

MAYER, Arnold. Ernährungsphysiologische Untersuchungen an Nonnenraupen (Lymantria monacha L.). I. Teil. *Zeitschrift für angewandte Entomologie*, Berlin 1940, Bd. XXVII, Heft 2, S. [157]-207, Abb. 1-9.

MEHL, Sigbert. Die Wiederstandsfähigkeit der Raupe der Heumotte (*Ephestia elutella* Hb.) gegen Frost. *Anzeiger für Schädlingskunde*, Berlin 1940, XVI. Jahrg., Heft 7, S. 78-83, Abb. 1-4. Schrifttum, S. 83.

MEISSAKHOVICH, J. A. The use of hydraulic sprayers for the spraying with concentrated solutions of poisons. *Bulletin of Plant Protection*, Moscow-Leningrad, 1940, No. 3, pp. 133-[140], figs. 1-2.
[In Russian, with title also in English].

MENDES, Luiz O. T. Os parasitas do "bicho mineiro das folhas de café", Leucoptera coffeella (Guér. Mén. 1842). *Revista do Instituto de Café do Estado de S. Paulo*, São Paulo, 1940, ano XV, n°. 155, pags. 6-12. Literatura citada, pags. 11-12. [With summary in English].

MENDES, Luiz O. T. O sombreamento do cafeeiro e a "broca do café". Segunda contribuição. *Revista do Instituto de Café do Estado de S. Paulo*, São Paulo, 1940, ano XV, n°. 164, pags. 1578-1584.
[See also this *Bulletin*, 1940, No. 4, p. 92. — *Stephanoderes hampei*].

MENDES, Luiz O. T. O sombreamento do cafeeiro e a " broca do café ". Tercera contribuição. *Revista do Instituto de Café do Estado de S. Paulo*, São Paulo, 1940, ano XV, nº 165, pags. 1817-1825, graficos I-II. Literatura citada, pag. 1825.

METCALF, C. L. Fifty years of entomological progress, Part III, 1909 to 1919. *Journal of Economic Entomology*, Menasha, Wisconsin, 1940, Vol. 33, No. 1, pp. 21-30.

MEYER, N. F. Parasites hatched in USSR in 1938-1939 out of the eggs of the corn-bug Eurygaster integriceps Osch. *Bulletin of Plant Protection*, Moscow-Leningrad, 1940, No. 3, pp. 79-[82].
[In Russian, with title also in English].

MICHELBACHER, A. E. Some entomological observations in California. *Journal of Economic Entomology*, Menasha, Wisconsin, 1940, Vol. 33, No. 1, pp. 141-143. [*Diabrotica soror, Heliothis obsoleta, Protoparce* spp.].

MILBRATH, J. A. Coryneum blight of oriental arborvitae caused by Coryneum berkmanii, n. sp. *Phytopathology*, Lancaster, Pa., 1940, Vol. 30, No. 7, pp. 592-602, figs. 1-3.
[On *Thuya orientalis* L. var. *conspicua* Berckmans. — A Latin diagnosis of the new species is given].

MILLER, Julian H. The genus Myriangium in North America. *Mycologia*, Lancaster, Pa., 1940, Vol. XXXII, No. 5, pp. 587-600. Literature cited, p. 600.
[This group of fungi occur on scale insects which parasitize various plants].

MILLS, W. R. Phytophthora infestans on tomato. *Phytopathology*, Lancaster, Pa., 1940, Vol. 30, No. 10, pp. 830-839. Literature cited, p. 839.

MONTEMARTINI, Luigi. Le malattie del cotone in Italia. *Fibre Tessili*, Roma, 1940, 3ª annata, n. 12, pp. 334-335.
[Plant and animal parasites reported up to date:— *Fusarium* spp., *Pythium* sp., *Verticillium* (*alboatrum* ?), *Rhizopus nigricans, Aspergillus alliaceus, Alternaria* sp., *Phyllosticta* sp., bacteria, *Agriotes lineatus, Platyedra gossypiella, Earias insulana, Bemisia* sp., aphids, *Tetranychus telarius*].

MORRILL, A. W. Living parasitic and predaceous insects for classroom use. *Journal of Economic Entomology*, Menasha, Wisconsin, 1940, Vol. 33, No. 1, pp. 123-128. Vol. 33, No. 1, pp. 123-128. Literature cited, pp. 127-128.

MORRISON, H. E. Seasonal history of hop pests on Oregon hops during 1938. *Journal of Economic Entomology*, Menasha, Wisconsin, 1940, Vol. 33, No. 1, pp. 70-71, figs. 1-3.
[*Tetranychus telarius, Phorodon humuli, Aeolothrips melaleucus, Frankliniella moultoni, Thrips tabaci, Cnephasia longana, Nymphalis antiopa*].

MORRISON, H. E. Small plots in field experiments on hop pests. *Journal of Economic Entomology*, Menasha, Wisconsin, 1940, Vol. 33, No. 1, pp. 112-113.
[*Tetranychus telarius, Phorodon humuli*].

MULDER, E. G. Ueber den Kupfermangel als Ursache der Urbarmachungskrankheit. *Zeitschrift für Pflanzenkrankheiten (Pflanzenpathologie) und Pflanzenschutz*, Stuttgart 1940, 50. Jahrg., Heft 5, S. 230-264, Abb. 1-8. Schrifttum, S. 262-264.

MURPHY, H. C., BURNETT, L. C., KINGSOLVER, C. H., STANTON, T. R., and COFFMAN, F. A. Relation of crown-rust infection to yield, test weight, and lodging of oats. *Phytopathology*, Lancaster, Pa., 1940, Vol. 30, No. 10, pp. 808-819, fig. 1. Literature cited, p. 819.
[*Puccinia coronata avenae*].

NAUDE, C. P. Removal of sooty blotch from oranges. *Union of South Africa, Department of Agriculture and Forestry, Bulletin No. 212 (Chemical Series No. 159)*, Pretoria, 1940, 13 pp.
[*Gloeodes pomigena*].

NEU, W. Die Bekämpfung von Maikäferengerlingen mit Kalidüngemitteln. *Anzeiger für Schädlingskunde*, Berlin 1940, XVI. Jahrg., Heft 7, S. [73]-75. Schrifttum, S. 75.
[*Melolontha melolontha, M. hippocastani*].

NIETZKE, Günther. Die Parasiten der Zwiebelminierfliege (Dizygomyza cepae Her.). *Zeitschrift für angewandte Entomologie*, Berlin 1940, Bd. XXVII, Heft 1, S. [71]-83, Abb. 1-12. Literatur, S. 83.

NIKITINA, T. F. Utilisation of Trichogramma against Barathra brassicae L. *Bulletin of Plant Protection*, Moscow-Leningrad, 1940, No. 3, pp. 83-84. [In Russian, with title also in English].

PAIKIN, D. M., and LEITZIS, P. R. The study of dichloretan as a substitute for carbon bisulphide in the time of the quarantine fumigation of seeds. *Bulletin of Plant Protection*, Moscow-Leningrad, 1940, No. 3, pp. 73-[77]. [In Russian, with title also in English].

PEARCE, G. W., and AVENS, A. W. Preparation of commercial calcium arsenate for use as an orchard insecticide. *Journal of Economic Entomology*, Menasha, Wisconsin, 1940, Vol. 33, No. 1, pp. 159-162. Literature cited, p. 162.

PERSON, H. L. The clerid *Thanasimus lecontei* (Wolc.) as a factor in the control of the western pine beetle. *Journal of Forestry*, Washington, D. C., 1940, Vol. 38, No. 5, pp. 390-396, fig. 1. Literature cited, p. 396. [*T. lecontei*, as a natural enemy of *Dendroctonus brevicornis*].

PETRI, Lionello. I parassiti vegetali dell'olivo. *Atti del Convegno Nazionale di Olivicoltura (Bari, 21-22 settembre 1938-XVI), a cura della Confederazione Fascista Agricoltori e del Settore della Olivicoltura della F. N. C. P. P. A.* Volume secondo (Relazioni e comunicazioni). Roma, Ramo Editoriale degli Agricoltori, 1940, pp. 46-55.
[With special reference to methods of controlling *Bacterium savastanoi, Stictis panizzei, Capnodium elaeophilum, Alternaria fumaginoides, Cycloconium oleaginum, Sphaeropsis dalmatica, Phoma oleae, Ph. fallens, Cylindrosporium olivae, Septoria oleagina, Fomes fulvus* var. *oleae, Stereum hirsutum, Polyporus* spp., *Schizophyllum alneum, Armillaria mellea, Rosellinia necatrix*].

PHILLIPS, H. Tarlton. Blackberry eradication. *Journal of the Department of Agriculture of Western Australia*, Perth, 1940, Vol. 17 (Second Series), No. 1, pp. 88-91. [*Rubus fruticosus*].

PLAKIDAS, A. G. Angular leaf spot of Pittosporum. *Mycologia*, Lancaster, Pa., 1940, Vol. XXXII, No. 5, pp. 601-608, figs. 1-4. [*Cercospora pittospori* sp. nov. on *Pittosporum tobira*. Latin diagnosis].

POISSON, Raymond. Sur la reproduction agame de *Myzus persicae* (Sulz.) (Hémiptère Phytophthire *Aphididae*) en Bretagne. *Comptes rendus des séances de la Société de Biologie et de ses filiales et associées*, Paris, 1940, tome CXXXIII, nº 4, p. 634-636.

POMERLEAU, René. Studies on the ink-spot disease of poplar. *Canadian Journal of Research*, Ottawa, Canada, 1940, Vol. 18, No. 5, pp. 199-214, figs. 1-3, pl.I. References, p. 214. [*Sclerotinia bifrons*].

POSNETTE, A. F. Transmission of "swollen shoot" disease of cacao. *Tropical Agriculture*, Trinidad, B. W. I., 1940, Vol. XVII, No. 5, p. 98. [A virus disease].

PRICE, W. C. Generalized defense reactions in plants. *The American Naturalist*, Lancaster, Pa., 1940, Vol. LXXIV, No. 751, pp. 117-128, 1 graph. Literature cited, pp. 127-128.

PRIKHODKINA, T. D. Poisoned baits as a control measure against the caterpillars of cutworm on beets. *Bulletin of Plant Protection*, Moscow-Leningrad, 1940, No. 3, pp. 17-[22]. [In Russian, with title also in English. — *Noctuidae*].

PYENSON, Louis. A new machine for turf dusting and hairy chinch bug control. *Journal of Economic Entomology*, Menasha, Wisconsin, 1940, Vol. 33, No. 1, pp. 153-155, fig. 1, Literature cited, p. 155. [*Blissus hirtus*].

RASSINA, F. V. The preservation of Solbar. *Bulletin of Plant Protection*, Moscow-Leningrad, 1940, No. 3, p. [78]. [In Russian, with title also in English].

RJAKHOVSKY, N. A. The efficiency of the thermal desinfection of the pea seed against Ascochyta pisi Lib. *Bulletin of Plant Protection*, Moscow-Leningrad, 1940, No. 3, pp. 130-[132]. [Bibliography], p. [132].
[In Russian, with title also in English].

ROHWER, S. A. Fifty years of entomological progress, Part V, 1929 to 1939. *Journal of Economic Entomology*, Menasha, Wisconsin, 1940, Vol. 33, No. 1, pp. 58-65.

SALLANS, B. J. The use of water by wheat plants when inoculated with *Helminthosporium sativum*. *Canadian Journal of Research*. Ottawa, Canada, 1940, Vol. 18, No. 5, pp. 178-198, figs. 1-4. References, p. 198.

SAMUEL, G. Lightning injury to potato tubers. *The Annals of Applied Biology*, Cambridge, 1940, Vol. 27, No. 2, pp. 196-198, pl. 9. References, p. 197.

SASSCER, E. R. Undesirable insect aliens. *Journal of Economic Entomology*, Menasha, Wisconsin, 1940, Vol. 33, No. 1, pp. 1-8. Literature cited, p. 8.

SCHAERFFENBERG, B[runo]. Zur Taxonomie einiger wirtschaftlich wichtiger Drahtwürmer. *Anzeiger für Schädlingskunde*, Berlin 1940, XVI. Jahrg., Heft 6, S. [61]-63, Abb. 1-7. Schrifttum, S. 63.
[*Corymbites aeneus, Athous niger, Lacon murinus*].

SCHAERFFENBERG, Bruno. Die Nahrung des Maulwurfs (Talpa europaea L.). *Zeitschrift für angewandte Entomologie*, Berlin 1940, Bd. XXVII, Heft 1, S. 1-70, Abb. 1-8. Schrifttum, S. 64-70.

SCHIMITSCHEK, Erwin. Beiträge zur Fortstenentomologie der Türkei III. Die Massenvermehrung des Ips sexdentatus Börner im Gebiete der orientalischen Fichte. *Zeitschrift für angewandte Entomologie*, Berlin 1940, Bd. XXVII, Heft 1, S. [84]-113, Abb. 26-33. Schrifttum, S. 113.

SCHUMILENKO, E. P. Rhamnus Pallasii — a new intermediate host of crown rust (Puccinia coronifera Kleb.) of oats. *Bulletin of Plant Protection*, Moscow-Leningrad, 1940, No. 3, pp. 89-[93]. [Bibliography], p. [93].
[In Russian, with title also in English].

SEAVER, Fred J. A new powdery mildew. *Mycologia*, Lancaster, Pa., 1940, Vol. XXXII, No. 5, pp. 649-651, fig. 1.
[*Uncinula jaborosae* sp. nov. on *Jaborosa integrifolia*. Latin diagnosis].

SHUMAKOV, E. M. Causes of swarming in locust species. *Proceedings of the Lenin Academy of Agricultural Sciences of U. S. S. R.*, Moscow, 1940, issue 21, pp. 10-[15], figs. 1-4. [Bibliography], p. [15].
[In Russian, with title also in English].

SIEGLER, E. A., and BOWMAN, J. J. Propagation of sour cherries by piece-root grafting to avoid spraying seedling stocks for leaf spot. *Phytopathology*, Lancaster, Pa., 1940, Vol. 30, No. 10, pp. 873-876. Literature cited, p. 876.
[*Coccomyces hiemalis*].

SILVESTRI, Filippo. La lotta contro la mosca delle olive. *Atti del Convegno Nazionale di Olivicoltura (Bari, 21-22 settembre 1938-XVI), a cura della Confederazione Fascista Agricoltori e del Settore della Olivicoltura della F. N. C. P. P. A.* Volume secondo (Relazioni e comunicazioni). Roma, Ramo Editoriale degli Agricoltori, 1940, pp. 56-82.
[*Dacus oleae*].

SMITH, Clayton O. Galls on Pseudotsuga macrocarpa induced by Bacterium pseudotsugae. *Phytopathology*, Lancaster, Pa., 1940, Vol. 30, No. 7, p. 624, fig. 1.

SMITH, Ralph H. Rating thoroughness of application in spraying citrus trees. *Journal of Economic Entomology*, Menasha, Wisconsin, 1940, Vol. 33, No. 1, pp. 85-91.

SNYDER, William C. White perithecia and the taxonomy of Hypomyces Ipomoeae. *Mycologia*, Lancaster, Pa., 1940, Vol. XXXII, No. 5, pp. 646-648. Literature cited, p. 648.

STARR, G. H. Experimental work for the control of ring-rot of potatoes. *American Potato Journal*, Somerville and New Brunswick, 1940, Vol. 17, No. 12, pp. [318]-322.
[*Bacterium sepedonicum*].

STATENS PLANTEPATOLOGISKE FORSØG. Plantesygdomme i Danemark 1939: Oversigt, samlet ved Statens plantepathologiske Forsøg. *Tidsskrift for Planteavl*, København 1940, Side [193]-265, 2 Diagr., Fig. 1-2.
[In Danish, with title and summary also in English:— ' Plant diseases and pests in Denmark 1939 '].

STATUTI, Filippo. Autarchia olearia e mosca delle olive. *Atti del Convegno Nazionale di Olivicoltura (Bari, 21-22 settembre 1938-XVI), a cura della Confederazione Fascista Agricoltori e del Settore della Olivicoltura della F. N. C. P. P. A.* Volume secondo (Relazioni e comunicazioni). Roma, Ramo Editoriale degli Agricoltori, 1940, pp. 127-141.
[*Dacus oleae*].

STELLWAAG, F., und STANDENMAYER, Th. Wie wirkt Dinitro-ortho-kresol auf Insekten. *Anzeiger für Schädlingskunde*, Berlin 1940, XVI. Jahrg., Heft 4, S. [37]-39. Schrifttum, S. 38-39.

STRAIB, W. Über die Vererbung des Verhaltens der Gerste gegenüber Gelbrost. *Der Züchter*, Berlin 1940, 12. Jahrg., Heft 5, S. 115-120, Abb. 1. Literatur, S. 120.
[*Puccinia glumarum*].

SWAIN, A. F., und BUCKNER, R. P. Toxicity of hydrocyanic acid to eggs of black scale (*Saissetia oleae* (Bern.)). *Journal of Economic Entomology*, Menasha, Wisconsin, 1940, Vol. 33, No. 1, pp. 107-111, figs. 1-2. Literature cited, p. 111.

SY, M. Methoden zur Prüfung von Pflanzenschutzmitteln. XXXV. Über die laboratoriumsmässige Prüfung von Insektiziden an der Obstmade. *Anzeiger für Schädlingskunde*, Berlin 1940, XVI. Jahrg., Heft 5, S. [49]-58, Abb. 1-8. Schrifttum, S. 58.
[*Carpocapsa* (*Cydia*) *pomonella*].

TANKÓ, Béla, und KISS, László. Beiträge zur Anwendung von Kalkarsenaten in Schwefelkalkbrühe. *Zeitschrift für Pflanzenkrankheiten (Pflanzenpathologie) und Pflanzenschutz*, Stuttgart 1940, 50. Bd., Heft 7, S. [321]-325, Diagr. 1-2. Schrifttum, S. 325.

TATTERSFIELD, F., and POTTER, C. The insecticidal properties of certain species of *Annona* and of an Indian strain of *Mundulea sericea* (" supli "). *The Annals of Applied Biology*, Cambridge, 1940, Vol. 27, No. 2, pp. 262-273, fig. 1. References, pp. 272-273.

TEODORESCO, I. C. L'efficacité des solutions « Casale » contre le mildiou de la vigne. *Annales de la Faculté d'Agronomie de Bucarest*, București, 1940, vol. I (1939-1940), p. [377]-389, fig. 1-4.
[*Plasmopara viticola*].

THOMAS, I., and JACOB, F. H. The strawberry aphis – *Pentatrichopus* (*Capitophorus*) *fragariae* Theob., with notes on *P. potentillae* Walk. and *P. tetrarhodus* Walk. *The Annals of Applied Biology*, Cambridge, 1940, Vol. 27, No. 2, pp. 234-247, figs. 1-5. References, p. 247.

THOMAS, Roy C. Additional facts regarding bacteriophage lytic to Aplanobacter stewarti. *Phytopathology*, Lancaster, Pa., 1940, Vol. 30, No. 7, pp. 602-611. Literature cited, p. 611.

TOKUNAGA, Yosio. Studies on the infection period of black spot disease of citrus. *The Formosan Agricultural Review*, Taihoku, Taiwan, Nippon, 1940, Vol. 36, No. 5, pp. 491-497, 1 graph. [Literature cited], p. 497.
[In Japanese, with title also in English. — *Phoma citrocarpa*].

TOLMATCHEV, A. I. Sur la constance de l'annualité et de la bisannualité chez certaines mauvaises herbes. *Sovietskaia Botanika*, Moscou-Leningrad, 1940, nº 5-6 p. 342-344.
[In Russian, with title also in French].

TRÄGÅRDH, Ivar. Neue Beobachtungen über den Schusterbock (Monochamus sutor L.) in Schweden. *Zeitschrift für angewandte Entomologie*, Berlin 1940, Bd. XXVII, Heft 1, S. [142]-149.

TRAPPMANN, W. Die gesetzliche Regelung des Handels mit Pflanzenschutzmitteln. *Die kranke Pflanze*, Dresden 1940, 17. Jahrg., Heft 1/2, S. 8-12; Heft 3/4, S. 29-31; Heft 5/6, S. 51-53.

UPHOLT, Wm. M., and CRAIG, Roderick. A note on the frequency distribution of black scale insects. *Journal of Economic Entomology*, Menasha, Wisconsin, 1940, Vol. 33, No. 1, pp. 113-114. Literature cited, p. 114.
[*Saissetia oleae*].

UPHOLT, W. M., and HOSKINS, W. M. Factors concerned in the deposits of sprays. VII. Design and use of a phytographic apparatus for studying the impact and movements of individual drops upon a surface. *Journal of Economic Entomology*, Menasha, Wisconsin, 1940, Vol. 33, No. 1, pp. 102-107, figs. 1-5. Literature cited, p. 107.

VALLEAU, W. D. Classification and nomenclature of tobacco viruses. *Phytopathology*, Lancaster, Pa., 1940, Vol. 30, No. 10, pp. 820-830. Literature cited, pp. 829-830.

VALLEGA, José. Especialización fisiológica de Puccinia graminis tritici en la Argentina, Chile y Uruguay. *Revista Argentina de Agronomía*, Buenos Aires, 1940, tomo 7, nº 3, págs. 196 a 220. Bibliografía citada, págs. 219 y 220.
[With summary also in English].

VAN LEEUWEN, E. R. The activity of adult codling moths as indicated by capture of marked moths. *Journal of Economic Entomology*, Menasha, Wisconsin, 1940, Vol. 33, No. 1, pp. 162-166. Literature cited, p. 166.
[*Cydia pomonella*].

VASSILIEV, V. P. Materials upon the ecology of the vine moth (Clysia ambiguella Hübn.) in the Ukrainian Socialist Soviet Republic and investigations of dust-like insecticides as a control measure against it. *Bulletin of Plant Protection*, Moscow-Leningrad, 1940, No. 3, pp. 44-[53], fig. 1. [Bibliography], p. [53].
[In Russian, with title also in English].

VERPLANCKE, G. Quelques champignons nouveaux pour la flore belge. *Bulletin du Jardin botanique de l'Etat*, Bruxelles, 1940, vol. XVI, fasc. 1, p. [9]-19.
[A list comprising 25 species of micromycetes].

VINCENT, A. E. Little leaf of apples. Control with zinc sulphate sprays. *The Agricultural Gazette of New South Wales*, Sydney, 1940, Vol. LI, Pt. 4, pp. 220-222, 3 figs.

VLADIMIRSKAJA, M. E. Application of Tuberculina persicina in rust control on different shrub species. *Proceedings of the Lenin Academy of Agricultural Sciences of U. S. S. R.*, Moscow, 1940, issue 23-24, pp. 36-41, fig. 1.
[In Russian, with title also in English].

WALTON, W. R., and PACKARD, C. M. The armyworm and its control. *U. S. Department of Agriculture, Farmers' Bulletin No. 1850*, Washington, D. C., 1940, 11 pp., 8 figs.
[*Cirphis nuipuncta*].

WAMPLER, E. L. Male scale injurious to olives. *Journal of Economic Entomology*, Menasha, Wisconsin, 1940, Vol. 33, No. 1, p. 203.
[*Parlatoria oleae*].

WATSON, M. A., and ROBERTS, F. M. Evidence against the hypothesis that certain plant viruses are transmitted mechanically by aphides. *The Annals of Applied Biology*, Cambridge, 1940, Vol. 27, No. 2, pp. 227-233. References, p. 233.

WEHRLE, Lawrence Paul. The discovery of an alfalfa weevil (*Hypera brunneipennis* Boheman) in Arizona. *Journal of Economic Entomology*, Menasha, Wisconsin, 1940, Vol. 33, No. 1, pp. 119-121. Literature cited, p. 121.

WEIMER, J. L. Austrian Winter field pea diseases and their control in the south. *United States Department of Agriculture, Circular No. 565*, Washington, D. C., 1940, 15 pp., 12 figs.
[*Ascochyta pinodella, Mycosphaerella pinodes, Septoria pisi, Aphanomyces euteiches, Erysiphe polygoni, Phytomonas pisi, Peronospora pisi*, mosaic disease (virus), *Fusarium* sp. and *Sclerotinia sclerotiorum* on *Pisum arvense*].

WELLBORN, Vera. Los insectos que atacan el algodón en El Salvador. *El Café de El Salvador*, San Salvador, 1940, vol. X, núm. 113, págs. 369 a 378, figs. 7-15.
[*Anomis texana, Lycophotia margaritosa, Estigmene acroca, Heliothis obsoleta, H. virescens*].

WELLMAN, Frederick L., and BLAISDELL, Dorothy J. Differences in growth characters and pathogenicity of Fusarium wilt isolations tested on three tomato varieties. *United States Department of Agriculture, Technical Bulletin No. 705*, Washington, D. C., 1940, 28 pp., 7 figs. Literature cited, pp. 27-28.
[*Fusarium bulbigenum* var. *lycopersici*].

WENT, F. W. Local and generalized defense reactions in plants and animals. Local reactions in plants. *The American Naturalist*, Lancaster, Pa., 1940, Vol. LXXIV, No. 751, pp. 107-116.

WIESMANN, R. Ein gefährlicher Borkenkäfer im Reisigwellenholz ? *Schweizerische Zeitschrift für Obst- und Weinbau*, Wädenswil 1941, 50. Jahrg., Nr. 2, S. 30-33, Abb. 1-2.
[*Hylesinus fraxini*].

WIESMANN, R., und PEYER, E. „Nirosan", ein wirksamer, ungiftiger Arsenersatz zur Bekämpfung des einbindigen Traubenwicklers. *Schweizerische Zeitschrift für Obst- und Weinbau*, Wädenswil 1940, 49. Jahrg., Nr. 24, S. 439-443.
[*Clysia ambiguella*].

WILCOX, J., and STONE, M. W. Control experiments on the tomato fruitworm in southern California during 1937. *Journal of Economic Entomology*, Menasha, Wisconsin, 1940, Vol. 33, No. 1, pp. 129-133. Literature cited, p. 133.
[*Heliothis obsoleta*].

WILLE, Johannes E. La conservación de los granos y los insectos que atacan a los granos y semillas almacenadas. *Ministerio de Fomento. Dirección de Agricultura y Ganadería. Instituto de Altos Estudios Agrícolas del Perú. Estación Experimental Agrícola La Molina. Circular N°. 53*, Lima-Perú, 1940, 23 págs., 33 figs.

WILLE, Johannes E. El "perforador pequeño de la bellota del algodonero", Mescinia peruella, Schaus. *Ministerio de Fomento. Dirección de Agricultura y Ganadería. Instituto de Altos Estudios Agrícolas del Perú. Estación Experimental Agrícola de la Molina, Boletín N°. 19*. Lima-Perú, 1940, 33 págs., 12 figs. Bibliografía, pág. [33].

WILSON, Malcolm, NOBLE, M., GRAY, E. G. Blind seed disease of ryegrass. *Nature*, London, 1940, Vol. 145, No. 3681, p. 783.
[A fungous disease].

WINTER, A. Gerhard. Ein neuer Fusskrankheitserreger an Weizen, Gerste, Roggen und Hafer (*Colletotrichum graminicolum* [Ces.] Wilson). *Phytopathologische Zeitschrift*, Berlin 1940, Bd. XIII, Heft 3, S. [282]-292, Abb. 1-9. Schrifttum, S. 292.

WINTER, A. Gerhard. Die Infektion des Weizens durch Ophiobolus graminis als Funktion der Bodenfeuchtigkeit. *Zeitschrift für Pflanzenkrankheiten (Pflanzenpathologie) und Pflanzenschutz*, Stuttgart 1940, 50. Bd., Heft 7, S. 326-356, Abb. 1-7. Schrifttum, S. 355-356.

WOGLUM, R. S., and LEWIS, H. C. Whitewash to control potato leafhopper on citrus. *Journal of Economic Entomology*, Menasha, Wisconsin, 1940, Vol. 33, No. 1, pp. 83-85. Literature cited, p. 85.
[*Empoasca fabae*].

WOLCOTT, George N. A Tachinid parasite of the Puerto Rican changa. *Journal of Economic Entomology*, Menasha, Wisconsin, 1940, Vol. 33, No. 1, p. 202.
[*Larra americana* parasiting on *Scapteriscus vicinus*].

WOLCOTT, George N., and MARTORELL, Luis F. Epidemics of fungus disease control insect pests in Puerto Rico. *Journal of Economic Entomology*, Menasha, Wisconsin, 1940, Vol. 33, No. 1, pp. 201-202. Literature cited, p. 202.
[*Spicaria rileyi* on *Thermesia gemmatilis*; *S. javanica* on *Icerya purchasi*].

WÖSTE, Gerhard. Beitrag zur Biologie der Kartoffel-Abbaukrankheiten. *Deutsche Landwirtschaftliche Presse*, Berlin 1940, 67. Jahrg., Nr. 37, S. [335]-336.

WÖSTE, G[erhard]. Ursachen und Bekämpfung der Kartoffel-Abbaukrankheiten. *Mitteilungen für die Landwirtschaft*, Berlin 1940, 55. Jahrg., Heft 38, S. 695-696.

YOUNG, P. A. Soil fumigation with chloropicrin and carbon bisulphide to control tomato root knot and wilt. *Phytopathology*, Lancaster, Pa., 1940, Vol. 30, No. 10, pp. 860-865. Literature cited, p. 865.
[*Heterodera marioni*, *Fusarium lycopersici*].

ZAMBIN, I. M. Control of Eurygaster integriceps Put. during the flight to wintering places. *Proceedings of the Lenin Akademy of Agricultural Sciences of U. S. S. R.*, Moscow, 1940, issue 19, pp. 17-[20].
[In Russian, with title also in English].

ZÄNKERT, Adolf. Untersuchungen über die Durchlässigkeit der Honigblase und des Chitinpanzers von Apis mellifica L. für Arsen. *Zeitschrift für angewandte Entomologie*, Berlin 1940, Bd. XXVII, Heft 1, S. [114]-125, Abb. 1-6, 1 Kurve. Literatur, S. 125.

ZAZHURILO, V. K. Pea varieties with pods resistant to *Ascochyta pisi* Lib. 6. *Comptes rendus (Doklady) de l'Académie des Sciences de l'U R S S*, Moscou, 1940, nouv. sér., vol. XXIX, nº 4, p. 351-352.

ZEROVA, M. Cactus diseases induced by Gloeosporium amoenum Sacc., Macrophoma opuntiae phaeacanthae sp. nov. and Botrytis cinerea Pers. *Journal botanique de l'Académie des Sciences de la RSS d'Ukraine*, Kiev, 1940, vol. I, nº 2, p. [301]-303, fig. 1-5. [Bibliographie], p. 302.
[In Russian, with title and summary also in French].

ZEROVA, M. Some Phomopsis species new for the USSR. *Journal botanique de l'Académie des Sciences de la RSS d'Ukraine*, Kiev, 1940, vol. I, nº 2, p. [305]-[312], fig. 1-10.
[In Russian, with title and summary also in French. — A description of 12 species of which 5 are new to science, all living on useful plants].

ZILLIG, Hermann. Neuzeitliche Spritz- und Stäubetechnik im Weinbau. *Das Weinland*, Wien 1940, 12. Jahrg., Nr. 10, S. 124-127, Abb. 1-7; Nr. 12, S. 147-150, Abb. 8-11.

ZILLIG, Hermann. Praktische Ergebnisse phänologischer Beobachtungen am Moselriesling (Vitis vinifera) und seinen Feinden. *Wein und Rebe*, Mainz 1940, 22. Jahrg., Nr. 9, S. [193]-212, Abb. 1-3. Schriftenverzeichnis, S. 211-212.
[With title and summary also in Italian:— 'Risultati pratici di osservazioni fenologiche sul Riesling della Mosella (Vitis vinifera) ed i suoi nemici'].

ZWEIGELT, F. Biologische und physiologische Untersuchungen über den Traubenwickler. *Das Weinland*, Wien 1940, 12. Jahrg., Nr. 8, S. [93]-95.
[*Clysia ambiguella, Polychrosis botrana*].

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Annuario vinicolo d'Italia. 21ª ed. 1940-41. Milano, « Enotria », [1940]. 768 p.

Bruno, M. I consorzi provinciali tra i produttori dell'agricoltura. Milano, A. Giuffrè, 1940. VVIII, 96 p. (Roma, R. Università. Istituto di diritto agrario. Pubblicazioni, 5.)

Calvino, Mameli Eva e Mario Calvino. Duecentocinquanta quesiti di giardinaggio risolti. Torino, G. B. Paravia & C., [1940]. [4], 260 p. (Biblioteca agricola « Paravia »).

Convegno nazionale di studi autarchici. Atti del 1º Convegno nazionale di studi autarchici, Milano, 1939. Milano, Istituto per gli studi corporativi e autarchici, [1939]. 417 p.

Convegno nazionale di studi autarchici. Atti del 2º Convegno nazionale di studi autarchici, Milano, 1940. Milano, Istituti per gli studi corporativi ed autarchici, [1940]. 639 p.

Entomologische Beihefte aus Berlin-Dahlem hrsg. von der Biologischen Reichsanstalt und dem Deutschen entomologischen Institut der Kaiser Wilhelm-Gesellschaft. Bd. 8. 1941. Berlin-Dahlem, [1941]. 239 p.

L'esportazione cotoniera italiana; vicende storiche, condizioni attuali, possibilità. [Published by the review 'Textilia']. [Milano, « Aracne », 1940]. 101, CVI p. [Articles by different authors. Title and text also in English, Spanish and French.]

Gualdi, A. Indicatore generale delle sagre, fiere e mercati d'Italia 1940. Carpi, Officine grafiche Gualdi Germano & figli, [1940]. 528, 135 p.

Ingaramo, G. La ricomposizione e l'arrotondamento dei fondi rurali frammentati. Milano, A. Giuffrè, 1939. XVI, 190 p. (Roma, R. Università. Istituto di diritto privato. Sez. diritto agrario. Pubblicazioni, 1).

Koenig, P. Die Entdeckung des reinen Nikotins im Jahre 1828 an der Universität Heidelberg durch Reimann und Posselt mit einer Beschreibung ihrer Vorläufer. Bremen, A. Geist, 1940. 90 p.

Monti, A. La bonifica dell'Agro romano e la lotta contro la malaria nel pensiero e nell'azione del conte Luigi Torelli. Milano, A. Cordani, 1941. 151 p.

Pallucchini, O. L'usufrutto del gregge; studio storico dogmatico. Milano, A. Giuffrè, 1940. 95 p. (Roma, R. Università. Istituto di diritto agrario. Pubblicazioni, 4).

Pesce, G. Il nuovo Codice civile divulgato e commentato. Roma, Ramo editoriale degli agricoltori, 1940.
v. 1. Delle persone. 1940. 383 p.

Pfeiffer, E. und E. Riese. Der erfreuliche Pflanzgarten; kurzgefasste Anleitung für die Selbstversorgung mit Gemüse. 2. Aufl. Basel, Zbinden & Hügin, 1941. VIII, 112 p.

Roma. Istituto italiano per il Medio ed Estremo Oriente. Il Man Chou Kuo; geografia, storia, economia. Milano, G. Principato, [1939]. 174 p. (Collana [di pubblicazioni]. 2).

Savini, E. Il formaggio di grana. Lodi, Tip. « La moderna », 1941. 72 p. (Istituto sperimentale di caseificio, Lodi).

Union syndicale de l'huilerie française, Paris. Les marchés des matières grasses en 1938. Paris, [1939]. 91 p.

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